

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:
E. I. DUPONT DE NEMOURS AND COMPANY

CASE NO.: BB1252 US NA1

APPLICATION NO.: UNKNOWN

GROUP ART UNIT: UNKNOWN

FILED: CONCURRENTLY HEREWITH

EXAMINER: UNKNOWN

FOR: **DISEASE RESISTANCE FACTORS**

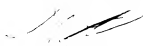
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

DECLARATION IN ACCORDANCE WITH 37 CFR 1.821

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 CFR 1.821(c) and (e), respectively are the same.

Respectfully submitted,



KENING LI
ATTORNEY FOR APPLICANTS
REGISTRATION NO. 44.872
TELEPHONE: 302-992-3749
FACSIMILE: 302-892-1026

Dated: 04 May 2001

SEQUENCE LISTING

411> B. I. de Pont de Nemours and Company

411> Butler, Paula
Falk, Earl
Farrell, Smelley G.
Fang, Yiwen
Gao, Peng
Heppard, Elmer
Liu, Shan-Shin
Miao, Guo-Hua
Pell, Leah
Pittman, Ann M.

412> Disease Resistance Factors

413> BB1252 US NA1

414>

414>

415> 60'107,242

415> 1999-11-08

415> US9, 25,953

415> 1999-10-01

412> Disease Resistance Factors

416> 17

417> Microsoft Office 97

418> 1

418> 520

418> DNA

418> Zea mays

420>

421> unsure

422> (405)..(406)

420>

421> unsure

422> 411)

420>

421> unsure

422> 417

420>

421> unsure

422> 449)

420>

421> unsure

422> 457)

[illegible]

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Pro Ala Pro Asp Asp Val Val Ser Asn Ala Asp Pro Met Cys Pro His
      20      25      30
Asn Ser Cys Pro Pro Ala Ile Arg Phe Asn Val Glu Gln Met Tyr Ala
      35      40      45
Ala Trp Ala Phe Lys Ile Thr Glu Leu Ile Ser Leu Phe Gln Arg Arg
      50      55      60
Leu Leu Asn Phe Val Asp Lys Thr Leu Val Glu Asp Val Leu Pro Ile
      65      70      75
Leu Gln Val Ala

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123 unsure
 123 26)

124. UNSURE
125. (335)

$\frac{1}{\sqrt{2}}$

4111: FRI
4112: TITRUM AMSTEL

4113:
4114: UNSEPE
4115: 7

4100: 6
Gln Gly Gln Ala Ser Asn Lys Asp Met Cys Ile Asp Ile Leu Glu
1 5 10 15

Arg His Met Met Ala Asp Phe Met Thr Ala Glu Asp Ser Val Thr Ser
20 25 30

Pro Leu Leu Ala Asp Asp Leu His Met Lys Leu Ser Tyr Leu Glu Asn
35 40 45

Arg Val Ala Phe Ala Arg Leu Phe Phe Pro Ala Glu
50 55 60

4116: 7
4117: 1227
4118: CNA
4119: Zea mays

4100: 7
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ctapagaagtt aagaagatgc gttctgcga gctgaaagag gacgtgctga aggcgtttag 960
caaggacaaag gctggagga gctgtgtc ggcctctccc tctgtctct cgtgtctgct 1020
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tactgtgaa aadatttaca aaaaaaa 1260

4110: 6
4111: FRI
4112: FRT
4113: Zea mays

4101: 8
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Asp Arg Val His Leu Val Lys Leu Leu Leu Asn Glu Ser Asp Ile Thr
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Leu Asp Arg Ala Asn Ala Val Ala Tyr Ala Ala Ser Tyr Tyr Asp Tr
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 Lys Val Val Ser Glu Leu Leu Asp Leu Ala Met Ala Asn Leu Asn Leu
 5
 Lys Asn Ser Arg Gly Tyr Thr Ala Leu His Leu Ala Ala Met Arg Arg
 10
 Glu Pro Ala Ile Ile Met Cys Leu Leu Asn Lys Gly Ala Asn Val Ser
 15
 Gln Leu Thr Ala Asp Gly Arg Ser Ala Ile Gly Leu Cys Arg Arg Leu
 20
 Thr Arg Ala Lys Asp Tyr Asn Thr Lys Met Glu Gln Gly Gln Glu Ser
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 Asn Lys Asp Arg Leu Cys Ile Asp Ile Leu Glu Arg Glu Met Met Arg
 30
 Asn Pro Met Ala Val Glu Asp Ala Val Thr Ser Pro Leu Leu Ala Asp
 35
 Asp Leu His Met Lys Leu Leu Tyr Leu Glu Asn Arg Val Ala Phe Ala
 40
 Arg Leu Phe Phe Pro Ala Glu Ala Lys Val Ala Met Gln Ile Ala Gln
 45
 Ala Asp Thr Thr Glu Glu Phe Gly Gly Ile Val Ala Val Ala Ala Ser
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 Thr Ser Gly Lys Leu Arg Glu Val Asp Leu Asn Glu Thr Pro Val Thr
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 Gln Asn Lys Arg Leu Arg Ser Arg Val Asp Ala Leu Met Lys Thr Val
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 Glu Leu Gly Arg Arg Tyr Phe Pro Asn Cys Ser Gln Val Leu Asp Lys
 65
 Phe Leu Glu Asp Asp Leu Pro Phe Gly Leu Asp Gln Phe Tyr Leu Gln
 70
 Arg Gly Thr Ala Asp Glu Gln Lys Val Lys Arg Met Arg Phe Cys Glu
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 Leu Lys Glu Asp Val Leu Lys Ala Phe Ser Lys Asp Lys Ala Glu Gly
 80
 Ser Val Phe Ser Gly Leu Ser Ser Ser Ser Ser Cys Ser Pro Pro Gln
 85
 Lys Tyr Ala Gln Arg
 90

211- 2
 211- 214

7

Gly Gly Gly Gly Gly Arg Leu Leu Val His Arg Cys Val Leu Ser Ala
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 Arg Ser Phe Ile Leu Arg Gly Val Phe Ala Arg Arg Ala Ala Ala Ala
 71
 Ala Gly Gly Gly Gly Gly Arg Gly Gly Gly Arg Leu Glu Leu Arg Glu
 103 107 111
 Leu Leu Gly Gly Gly Gly Gly Glu Glu Val Glu Val Gly Tyr Glu Ala Leu
 115 119 123
 Arg Leu Val Leu Asp Tyr Leu Tyr Ser Gly Arg Val Gly Asp Leu Phe
 130 134 140
 Lys Ala Ala Cys Leu Cys Val Asp Glu Asp Cys Ala His Val Gly Cys
 145 150 155 160
 His Pro Ala Val Ala Phe Met Ala Glu Val Leu Phe Ala Ala Ser Thr
 165 170 175
 Phe Glu Val Ala Glu Leu Thr Asn Leu Phe Glu Arg Arg Leu Leu Asp
 180 185 190
 Val Leu Asp Lys Val Glu Val Asp Asn Leu Leu Leu Ile Leu Ser Val
 195 200 205
 Ala Asn Leu Cys Asn Lys Ser Cys Met Lys Leu Leu Glu Arg Cys Leu
 210 215 220
 Asp Met Val Val Arg Ser Asn Leu Asp Met Ile Thr Leu Glu Lys Ser
 225 230 235 240
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 Gly Leu Ile Ser Pro Glu Asn Lys Gly Phe Pro Asn Lys His Val Arg
 260 265 270
 Arg Ile His Arg Ala Leu Asp Ser Asp Asp Val Glu Leu Val Arg Met
 275 280 285
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 290 295 300
 Tyr Ala Val Glu His Cys Asp Ser Lys Ile Thr Thr Glu Leu Leu Asp
 305 310 315 320
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 325 330 335
 Leu His Ile Ala Ala Arg Arg Glu Pro Lys Ile Ile Val Ser Leu
 340 345 350
 Leu Thr Lys Gly Ala Arg Pro Ala Asp Val Thr Phe Asp Gly Arg Lys
 355 360 365
 Ala Val Glu Ile Thr Tyr Arg Leu Thr Leu Glu Gly Asp Tyr Phe Gly
 370 375 380

Val Thr Ser Gly Lys Pro Ser Pro Lys Asp Arg Leu Lys Ile Glu
388 390 391 411

Ile Leu Gly Ser Ala Gly Arg Arg Asp Pro Gln Leu Gly Glu Ala Ser
400 410 415

Val Ser Leu Ala Met Ala Gly Gln Ser Leu Arg Gly Arg Leu Leu Tyr
420 425 430

Leu Gly Asn Arg Val Ala Leu Ala Arg Ile Met Phe Pro Met Glu Ala
435 440 445

Arg Val Ala Met Asp Ile Ala Gln Val Asp Gly Thr Leu Glu Phe Asn
450 455 460

Leu Gly Ser Gly Ala Asn Pro Pro Pro Glu Arg Gln Arg Thr Thr Val
465 470 475 480

Asp Leu Asn Glu Ser Pro Phe Ile Met Lys Glu Glu His Leu Ala Arg
485 490 495

Met Thr Ala Leu Ser Lys Thr Val Glu Leu Gly Lys Arg Phe Phe Pro
500 505 510

Arg Cys Ser Asn Val Leu Asp Lys Ile Met Asp Asp Glu Thr Asp Pro
515 520 525

Val Ser Leu Gly Arg Asp Thr Ser Ala Glu Lys Arg Lys Arg Phe His
530 535 540

Asp Leu Gln Asp Val Leu Gln Lys Ala Phe His Glu Asp Lys Glu Glu
545 550 555 560

Asn Asp Arg Ser Gly Leu Ser Ser Ser Ser Ser Ser Thr Ser Ile Gly
565 570 575

Ala Ile Arg Pro Arg Arg
580

•110• 11
•111• 2069
•112• DNA
•113• Oryza sativa

•120
•121• unsure
•122• 65

3400• 11
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[illegible]

444, 14

Pro Ala Pro Asp Asp Val Val Ser Cys Ala Asp Pro Met Cys Pro His
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Ala Trp Ala Phe Lys Ile Thr Glu Leu Ile Ser Leu Phe Gln Arg Arg
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Leu Gln Val Ala Phe His Ser Glu Leu Thr Pro Val Leu Glu Lys Cys
45 90 95

Glu Leu Pro Ser Glu Val Ala Val Glu Ile Lys Glu Ile Arg Gln Lys
126 127

Lys Arg Val Arg Arg Ile His Arg Ala Leu Asp Ser Asp Asp Val Glu
115 160 155 160

Leu Val Lys Ser Leu Leu Ser Leu Lys Val Ile Thr Leu Asp Asp Ala
 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

2100 13
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[illegible]

4210 14

11/19

212 ERT

5213. *Triticum aestivum*

6430 - 14

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100 14
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Ilu Arg Glu Met Met Arg Asn Pro Met Thr Ala Glu Asp Ser Val Thr
      10 25 30
Ser Pro Leu Leu Ala Asp Asp Leu His Met Lys Leu Ser Tyr Leu Glu
      35 40 45
Asn Arg Val Ala Phe Ala Arg Leu Phe Phe Pro Ala Glu Ala Lys Val
      50 55 60
Ala Met Gln Ile Ala Gln Ala Asp Val Thr Pro Glu Val Gly Gly Phe
      65 70 75
Ser Ala Ala Ser Thr Ser Gly Lys Leu Arg Glu Val Asp Leu Asn Glu
      80 85 90
Thr Pro Val Thr Lys Asn Lys Arg Leu Arg Ser Arg Val Asp Ala Leu
      100 105 110
Ala Lys Thr Val Glu Glu Leu Gly Arg Arg Tyr Phe Pro Asn Cys Ser Gln
      115 120 125
Val Leu Asp Lys Phe Leu Glu Asp Gly Leu Pro Asp Gly Leu Asp Ala
      130 135 140
Phe Glu Gln Glu Ser Tyr Thr Trp Asp Glu Gln Gln Val Lys Lys Met
      145 150 155 160

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11/11/11 11:11:11 AM 11/11/11 11:11:11 AM 11/11/11 11:11:11 AM 11/11/11 11:11:11 AM
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Ala Arg Ser Arg Leu Asp Asp Val Ser Ile Asp Lys His Leu Pro Phe
 310 Val Ala Val Phe Ile Lys Phe Ile Arg Gin Lys Ser Gin Pro Asp
 315 Gly Asp Thr Val Ile Ser Asp Phe Val His Glu Lys Arg Val Arg
 320 Arg Ile His Arg Ala Leu Asp Ser Asp Asp Val Glu Leu Val Lys Leu
 325 Leu Leu Asn Glu Ser Glu Ile Thr Leu Asp Asp Ala Asn Ala Leu His
 330 Tyr Ala Ala Ala Tyr Cys Asp Ser Lys Val Val Ser Glu Leu Leu Asp
 335 Leu Arg Leu Ala Asn Leu Asn Leu Lys Asn Ser Arg Gly Tyr Thr Ala
 340 Leu His Leu Ala Ala Met Arg Arg Glu Pro Ala Ile Ile Met Cys Leu
 345 Leu Asn Lys Gly Ala Ala Val Ser Glu Leu Thr Ala Asp Gly Gin Ser
 350 Ala Met Ser Ile Cys Arg Arg Leu Thr Arg Met Lys Asp Tyr Asn Thr
 355 Lys Met Glu Gin Gly Glu Glu Ser Asp Lys Asp Arg Leu Cys Ile Asp
 360 Ile Leu Asp Arg Glu Met Ile Arg Lys Pro Met Ala Val Glu Asp Ser
 365 Val Thr Ser Pro Leu Leu Ala Asp Asp Leu His Met Lys Leu Leu Tyr
 370 Leu Glu Asn Arg Val Ala Phe Ala Arg Leu Phe Phe Pro Ala Glu Ala
 375 Lys Val Ala Met Gin Ile Ala Thr Ala Asp Thr Thr pro Glu Phe Gly
 380 Ile Val Pro Ala Ala Ser Thr Ser Gly Lys Leu Lys Glu Val Asp Leu
 385 Asn Glu Thr Pro Val Thr Gin Asn Lys Arg Leu Arg Ser Arg Val Asp
 390 Ala Leu Met Lys Thr Val Glu Leu Gly Arg Arg Thr Phe Phe Asn Cys
 395 Ser Gin Val Leu Asp Lys Phe Leu Glu Asp Asp Leu Pro Asp Ser Pro
 400 Asp Ala Leu Arg Leu Glu Asn Gly Thr Ser Asp Glu Gin Asn Val Lys
 405

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Leu His Glu Glu Leu Val Lys Thr Ile Ile Asp Arg Arg Lys Glu Leu
 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995

Leu Ala Leu Gly Asn Ala Ser Leu Thr Arg Ser Thr Ser Thr Ser
540 541 542 543 544 545 546 547 548 549 550 551 552 553

Lys Ser Thr Gly Gly Lys Ala Ser Asn Arg Lys Leu Ser His Arg Arg
554 555 556 557 558 559 560 561 562 563 564 565 566 567

Arg